

brown; cilia whitish cinereous, with a greyish brown line near their base. *Abdomen* greyish brown, anal tuft inclining to ochreous. *Legs*: ♂, posterior pair, densely and widely tufted above with long whitish cinereous hair-scales; posterior tarsal joints faintly spotted with pale brownish.

Type, ♂ (70270); ♀ (70269) Mus. Wlsm.

Hab. JAPAN (Pryer, 1886)—HONDO—Foochau, IV. 1886 (Leech). Nine specimens.

XIV.—On Giant Squirrels from the Amazonian Region.
By OLDFIELD THOMAS.

THE British Museum has received during the last two or three years a number of Giant Squirrels belonging to the *Sciurus Langsdorfi* group from several different localities in South America. On determining these one proves to need description, while additional localities may be recorded for others.

During the progress of this work Dr. Kükenthal, of Breslau, has been good enough to render me valuable assistance by the loan of the original type of *S. tricolor*, Pöppig, from Maynas, Peru, without which it would have been impossible to determine to what form that name should be applied.

Sciurus igniventris, Wagn.

Nericagua and Munduapo, Upper Orinoco (*G. K. Cherrie*); Bogota (*G. D. Child*).

The type locality of this species is Marabitanas, on the Upper Rio Negro, not far from the latter river's junction with the Upper Orinoco. The further extension of the species westwards to Bogota follows the line of the Rio Meta, which falls into the Orinoco in the same district that Mr. Cherrie collected in. South-eastwards the species ranges along the Rio Negro to its mouth.

Sciurus tricolor, Pöppig.

Mouth of Rio Coca, Upper Rio Negro. Collected and presented by Mr. W. Goodfellow.

The type locality of Pöppig's species was Maynas, in the angle between the Lower Huallaga and the Marañon; but as Mr. Goodfellow obtained two species on the Coca to the northwards, and a third had been found by Signor Balzan to the southwards, I was in great difficulty as to which was the real *S. tricolor*. Happily Dr. Kükenthal's kindness has

enabled me to fix *S. tricolor* as one of the two species found by Mr. Goodfellow on the Coca. Its differences from its ally are enumerated below. The type is an old female, and though it was said by Prof. Gravenhorst* to have only 6 mammæ, careful search shows that it has 8, the usual number in this group.

The skull of *S. tricolor* is less bowed than in the other species and has an unusually long narrow muzzle.

The melanoid *S. fumigatus*, Gray, from the "Upper Amazon," may possibly be referable to *S. tricolor*, but its determination must always remain somewhat doubtful. The same author's *S. brunneoniger* is also a member of the present group, but is not like any properly localized specimen that I have seen.

Sciurus cocalis, sp. n.

Not dissimilar at first sight to *S. tricolor*, found in the same place, and it is only after the examination of three skins of one form and seven of the other that I have satisfied myself of their essential difference. General colour above grizzled yellowish anteriorly, becoming chestnut-rufous posteriorly. Crown finely grizzled rufous, not blackish. Backs of ears rich rufous, a prominent spot behind their posterior bases bright fulvous. Under surface clear buffy or orange-buffy, becoming more rufous on the throat and inner sides of the limbs; line of demarcation on sides sharply defined and in most specimens with a distinct black line running along the lower edge of the upper colour, and an indication of a rufous line along the pale colour just below it. Fore limbs bright orange-rufous on their outer surfaces from the elbows downwards. Hind limbs chestnut-rufous externally as far down as the ankles, then the feet are again orange-rufous like the fore limbs. Tail long, bushy, black for its basal 3 inches, then broadly washed with bright orange-rufous, and so far like that of *S. tricolor*, but below the black which succeeds the rufous on the hairs there is a broad band of yellowish or orange, which may either extend downwards to the bases of the hairs or be succeeded again by another dull ring.

Skull shorter, more bowed, and with a more normal-shaped muzzle than in *S. tricolor*.

Dimensions of the type (an adult male, measured in skin):—

Head and body 315 millim.; tail 283, with terminal hairs 345; hind foot (wet), s. u. 63, c. u. 66; ear (wet) 32.

* Tschudi, Faun. Peruana, Mamm. p. 157 (1845).

Skull: basilar length (of a second specimen) 47.5; nasals (of type) 18.3 * \times 8.5; interorbital breadth 20.5; intertemporal breadth 19.2; diastema 17.8; length of upper molar series 10.4.

Hab. Mouth of Coca River, Upper Rio Napo.

Type. Male. B.M. no. 0. 6. 3. 4. Collected in June 1899 and presented by Mr. Walter Goodfellow.

It is probable that just as *S. tricolor* ranges northwards from Maynas to the Coca River, so *S. cocalis* will be found to range up that river westwards and northwards, and that the two species only overlap just at this point. As the two species are found together it may be well to emphasize their differences by repeating that *S. cocalis*, as represented by seven specimens, differs from *S. tricolor* (1) by its grizzled instead of blackish crown, (2) by the light patches behind the ears, (3) by its bright orange instead of chestnut fore limbs and hind feet, (4) its black-lined sides, (5) its basally ringed caudal hairs, and (6) its shorter muzzled skull.

Sciurus pyrrhonotus, Wagn.

Yungas and Misiones, on the Upper Mamoré, Bolivia (*L. Balzan*, in Museo Civico, Genoa).

The type locality of *S. pyrrhonotus* is Borba, near the mouth of the Madeira, so that its occurrence on the Mamoré, on the far upper waters of that stream, affords another instance of the manner in which the ranges of these squirrels follow the lines of the great Amazonian rivers.

XV.—*Plankton Studies*.—II. On *Pleodorina illinoisensis*, a new Species from the Plankton of the Illinois River. By C. A. KOFOID, Ph.D.†

[Plates V. & VI.]

THE genus *Pleodorina* was discovered in 1893 by Shaw (1894) at Palo Alto, California, and in May of the following year the species *Pleodorina californica*, upon which the genus was founded, was detected by Mottier (1894) in water from a shallow stagnant pool near Bloomington, Indiana. During

* Diagonally.

† From the 'Bulletin of the Illinois State Laboratory of Natural History,' vol. v. pp. 273-293. From a separate impression communicated by the Author.